and rounded to integers for ease of use. For each variable in the model, an integer score is obtained based on the youth's characteristics, and a total score determined by summing the individual scores. The magnitude of the total score reflects that individual youth's injury risk for the specific task. Over the 3-year study period, 407 youth and their "parent partners" provided usable data (4,098 youth weeks, 2,788 injury events). Empirically-derived CMS models for at least five specific tasks will be presented along with conclusions and recommendations.

B5.4

Title: Managing Human Risk in Livestock Handling
Authors: Isaccs SG, Powers L, Lineberry GT, Scharf T, Wiehagen WJ

According to the 1997 Census of Agriculture, 66.7% of farms in the United States produce some form of livestock. Similarly, 63.4% of Kentucky farms have livestock. Considering that agriculture typically occupies one of the top three rankings of hazardous occupations, research opportunities exist for studies identifying causes of traumatic injuries on livestock farms. This project addresses the human risk and injury prevention in livestock handling practices.

Using the precepts of the Work Crew Performance Model (Wiehagen, Lineberry, et al, 1994), a critical-factor assessment tool from the mining and construction industries, this project attempted to identify and prioritize critical tasks in both routine and emergency livestock handling situations. Tasks were identified and ranked by farm-family focus groups on the basis of the seriousness of economic consequences resulting from the failure to perform the task correctly. Focus group results for both routine and emergency livestock handling situations will be presented.

Kentucky Cooperative Extension Agents for Agriculture completed a validation of the tasks identified by these farm families. County agents assisted in identifying and ranking the most critical tasks when handling livestock. The results of this validation process will also be presented.

A livestock handling safety checklist has been developed that will become part of multi-disciplinary extension education programming in Agricultural Economics, Agricultural Engineering, and Animal Science. The likelihood and economic consequences of injury events in livestock handling can be compared to the costs of practices, technologies, and facilities for safe handling to aid livestock producers in choosing less risky courses of action.

B5.5

Title: Investigation of Vehicle Jarring/Jolting on Self-Propelled Farming Equipment
Authors: Mayton AG, Ambrose DH, Jobes CC, Matty TJ

This presentation will update an ongoing, NORA-sponsored project in which NIOSH researchers are studying the injury risk associated with operator exposure to vehicle jarring/jolting on mobile farming equipment. Field and laboratory data collection are described and findings from the analysis of data are discussed. Field data were collected for tractor operators during baling, mowing, and tilling and a skid-steer loader operator during removal of a small tree. Preliminary results show the operator of the skid-steer loader is exposed to higher levels of vehicle jarring/jolting than the tractor operators for the said operations. Moreover, the results are highlighted for health and work history data collected from 50 farmers and farm equipment operators attending a major farm bureau convention and annual meeting. Further, researchers discuss a computer-based, seat suspension model that will enable researchers to determine how effective the seat suspension will attenuate jars and jolts. The model will also aid in the evaluation of engineering controls to lower the risk of worker injury. The results of this project could be used to significantly reduce operator lost-time injuries associated with vehicle jarring/jolting.

Session C1.0
Title: Childhood Agricultural Injury Prevention
Moderator: David Hard

C1.1

Title: The NIOSH Childhood Agricultural Injury Prevention Initiative
Author: Hard DL

The NIOSH Childhood Agricultural Injury Prevention Initiative builds upon previous NIOSH research and objectives, as well as the goals, recommendations and strategies in the 2002 report "Childhood Agricultural Injury Prevention: Progress Report and Updated National Action Plan from the 2001 Summit" and the earlier 1996 report "Children in Agriculture: Opportunities for Safety and Health–A National Action Plan (NAP)." These reports recommend leadership, surveillance, research, education, and public policy. The NAP plan specifically recommended that NIOSH serve as the lead federal agency in preventing childhood agricultural injury.

In implementing the Childhood Agricultural Injury Prevention Initiative, NIOSH has assumed a leadership role by identifying, funding and developing childhood agricultural injury prevention activities. Efforts by NIOSH and its extramural partners have resulted in substantial progress. Twenty-five research

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